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SCHLUMBERGER-DOLL RESEARCH 36 OLD QUARRY ROAD RIDGEFIELD, CONNECTICUT 08877-4108 203-431-5000

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Date: January 14, 2004**Transmitted From:**

William B. Batzer (Reg. No. 37,088)
Schlumberger-Doll Research
Telephone No.: 1-203-431-5506

Transmitted To:

Examiner Toan Le
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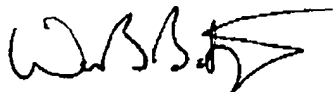
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MESSAGE

Examiner Le,

Attached, as we discussed earlier this afternoon, is an abstract for U.S. Patent Application Serial No. 10/088,725, our docket no. 57.0359-WO. I hereby cancel withdrawn claims 12-17 and confirm that claim 2 has been cancelled. Regards.

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ABSTRACT

A method and system for real time updating of an earth model. The efficiency with which an oil or gas well is constructed can be enhanced by updating the relevant earth model using real-time measurements of the effective density of the drilling fluid and other parameters. The method includes generating an earth model used for predicting potential problems in drilling of a borehole having a predetermined trajectory. Evaluations of the state of the borehole and local geological features are obtained which are based on the earth model. Real time data is used to create a diagnosis of the state of the borehole and local geological features. The evaluations are compared with a diagnosis to identify inconsistencies. A component of the earth model is identified that is both related to the identified inconsistency and has a high degree of uncertainty. The selected component of the earth model is then updated prior to completing construction of the borehole using the received data.